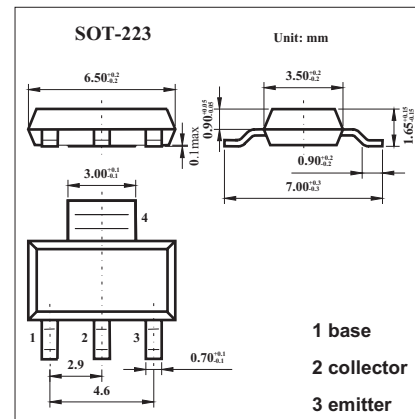


NPN Silicon Planar Medium Power High Gain Transistor FZT688B

■ Features

- Extremely low equivalent on resistance; $R_{CE(sat)} 83m\Omega$ at 3A.
- Gain of 400 at $I_c=3$ Amps and very low saturation voltage.



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	12	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	5	V
Peak pulse current	I_c	4	A
Continuous collector current	I_{CM}	10	A
Power dissipation	P_{tot}	2	W
Operating and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

FZT688B

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Breakdown Voltages	V _{(BR)CBO}	I _C =100μA	12			V
Breakdown Voltages	V _{(BR)CEO}	I _C =10mA	12			V
Breakdown Voltages	V _{(BR)EBO}	I _E =100μA	5			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =10V			0.1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =4V			0.1	μA
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C =0.1A, I _B =1mA I _C =0.1A, I _B =0.5mA I _C =1A, I _B =50mA I _C =3A, I _B =20mA I _C =4A, I _B =50mA			0.04 0.06 0.18 0.35 0.40	V
Base-emitter saturation voltage *	V _{BE(sat)}	I _C =3A, I _B =20mA			1.1	V
Base-Emitter Turn-On Voltage *	V _{BE(on)}	I _C =3A, V _{CE} =2V			1.0	V
Static Forward Current Transfer Ratio*	h _{FE}	I _C =0.1A, V _{CE} =2V I _C =3A, V _{CE} =2V I _C =10A, V _{CE} =2V	500 400 100			
Transitional frequency	f _T	I _C =50mA, V _{CE} =5V f=50MHz	150			MHz
Input capacitance	C _{ibo}	V _{EB} =0.5V, f=1MHz		200		pF
Output capacitance	C _{obo}	V _{CB} =10V, f=1MHz		40		pF
Turn-on time	t _(on)	I _C =500mA, V _{CC} =10V		40		ns
Turn-off time	t _(off)	I _{B1} =50A, I _{B2} =50mA		500		ns

* Pulse test: t_p = 300 μs; d ≤ 0.02.

■ Marking

Marking	FZT688B
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